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Two new species of tiger beetles from Palawan
(Zwei neue Arten von Sandlaufkäfer aus Palawan)

(Coleoptera, Cicindelidae)

By Jakob M. BOGENBERGER

Abstract

Two new species of tiger beetles from northern Palawan, Philippines are described and figured: *Therates palawanensis* sp. n. and *Cicindela (Cylindera) glabra* sp. n.

In April 1984 I was visiting Palawan, Philippines. In Port Barton on the north west coast of this island I found two new species of tiger beetles in the same habitat which was a tiny streamlet in the forest near the beach. One species is a *Therates* related to *T. bryanti* W. HORN and to *T. erinnys* BATES. The other new species belongs to *Cicindela* subgenus *Cylindera*.

Therates palawanensis sp. n.

(Figs 1, 2)

Description:

Size: Length (male and female) 8.0–8.7 mm (sine labro).

Color: Body shiny black with some blue green reflections. Labrum, apical corners of clypeus, palpi, median portion of antennal articels 1–2(–4), apex of abdomen (from the 6th segment), basis of elytra and legs light reddish brown. Articels 3–5 of tarsi darkend; praetarsus of male black. Basis of mandibles, coxae (only median part of metacoxae), trochanter, basal part of femur and apical spots on elytra clear white. Middle band of elytra light tan.

General characteristics: Longitudinal striae on vertex and suborbital plates very weak. Labrum with 6 or 5 apical teeth (Fig. 1b). Pronotum as long as wide, posterior restriction slightly deeper than anterior. Elytra with basal, central (middle band) and apical protuberances. Basal 2/3 of elytra deeply punctate, only few and shallow punctures on the middle band. Elytra almost parallel, apex of elytra with triangular sutural spine and lateral angel which is slightly rounded; elytral margin between concave.

Male genitalia: Aedeagus see Fig. 2a.

Female genitalia: Sternum 8 strongly sclerotized with irregular ridges, posterior emargination deep and V-shaped, apices sharp (Fig. 2b). 2nd gonacoxa with few apical setae along medial margin (Fig. 2b). 2nd gonapophsis strongly curved, broad and elongated, medial portion about 2/3 the length of the lateral portion, lateral portion with one additional lateral tooth (Fig. 2b). Syntergum 9 and 10 apical with long setae, ventral part with a Y-shaped sclerotized ridge (Fig. 2c).

Type Material:

Holotype: ♀, Philippines, Palawan, Port Barton, 7.–12.4.84, 119°08′ E, 10°23′ N, leg. J. BOGENBERGER; deposited in the Zoologische Staatssammlung, München. Paratypes: Same data as holotype; 1 ♀ and 3 ♂♂ in the author's collection, 1 ♂ in coll. J. WIESNER.

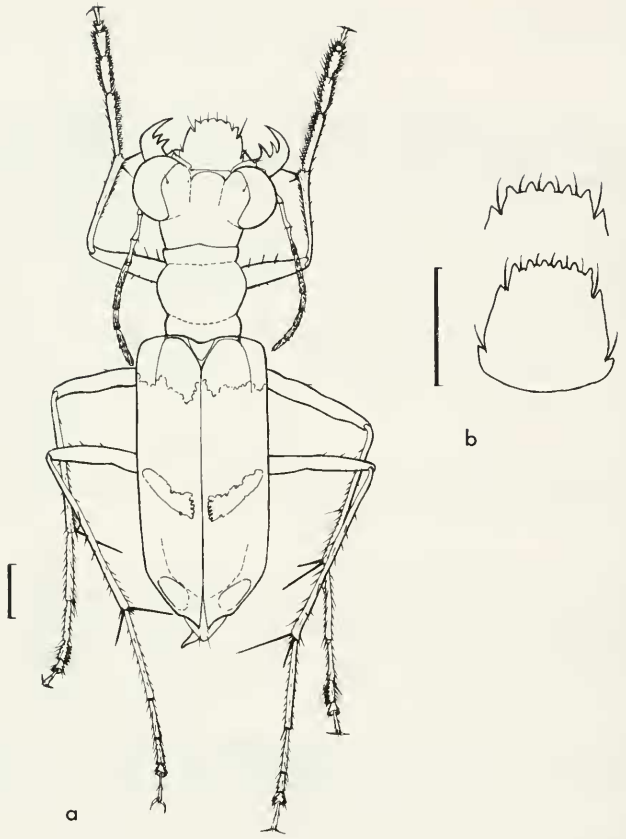

Fig. 1: Habitus of *Therates palawanensis* sp. n. (male) (a) and labrum with 6 or 5 (upper insert) apical teeth (b). Bar represents 1 mm.

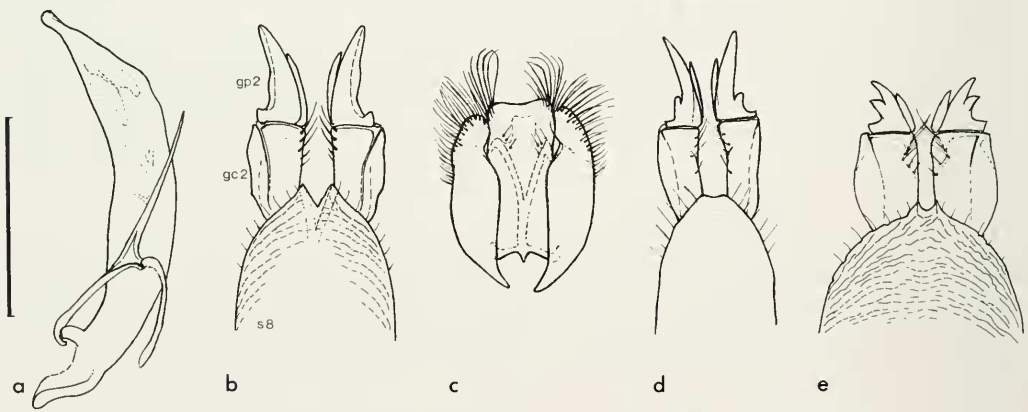

Fig. 2: Male genitalia of *Therates palawanensis* sp. n. (a). Female genitalia: ventral aspect of apex of sternum 8 (s8), 2nd gonacoxa (gc2) and 2nd gonapophysis (gp2) of *T. palawanensis* sp. n. (b), *T. bryanti* W. HORN (d) and *T. erinnys* BATES (e) and dorsal aspect of syntergum 9 & 10 of *T. palawanensis* sp. n. (c). Bar represents 1 mm.

Distribution: Known only from the type series from northern Palawan.

Diagnosis: *Therates palawanensis* sp. n. has three protuberances on each elytra and is therefore a member of the *T. batesii* group (Wiesner 1988). It is closely related to *T. erinnys* Bates and to *T. bryanti* W. Horn. *T. palawanensis* has a more rounded lateral angel on the apex of elytra than *T. erinnys* but a more pronounced one than *T. bryanti.* Coloration resembles *T. bryanti* except for the clear white apical maculation of elytra and white basis of mandibels. *T. palawanensis* lacks the transverse sutures on the vertex present at both *T. bryanti* and *T. erinnys.* All three species greatly differ in the form of the female genitalia (Fig. 2b, d, e). Sternum 8 of *T. palawanensis* and *T. erinnys* exhibit sclerotized ridges which are missing at *T. bryanti.* The posterior emargination of *T. palawanensis* is deep and V-shaped, of *T. erinnys* small and U-shaped where as *T. bryanti* has only a small shallow depression. 2nd gonapophses of *T. erinnys* is small and slightly curved, of *T. palawanensis* and of *T. bryanti* long and strongly curved. The lateral portions exhibit 2 lateral teeth in *T. bryanti* and *T. erinnys* but only one in *T. palawanensis.*

***Cicindela (Cylindera) glabra* sp. n.**
(Figs 3, 4)

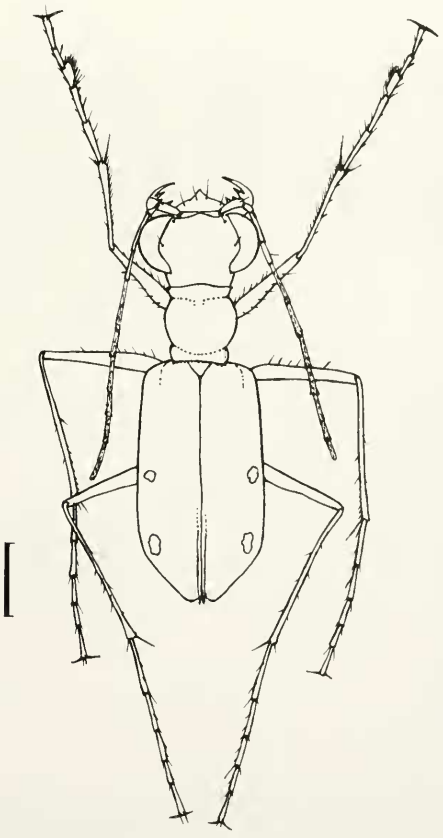

Fig. 3: Habitus of *Cicindela (Cylindera) glabra* sp. n. (male). Bar represents 1 mm.

Description:

Size: Length (male and female) 5.6–6.0 mm (sine labro).

Color: Black with some cupreous green reflections. Lateral margin of pronotum and elytra shiny dark blue. Labrum, palpi, mandibles, antennae and legs testaceous. Articels 2–11 of antennae, apical ends of tibiae and apices of the tarsal articels slightly darkend. Trochanter, basis of femur and mandibels, basal articels of palpi white. Maculation on elytra consisting of two white spots.

General characterisitics: Head glabrous (except for 2 pairs of supraorbital sensory setae) with dense and deep striation. Labrum very long unidentate with 4 setae (Fig. 4d). Palpi relatively short. Thorax glabrous except for very few primary setae on disc of metasternum. Sides of pronotum convex. Disc of pronotum with dense transversal striation. Mesepisternum of female with a deep groove interrupted by a round protuberance (coupling sulcus, Freitag 1974). Apex of front and middle trochanter each with 1 fixed setae. Abdomen laterally glabrous, on disc fine decumbent setose. Elytra almost parallel. Apex rounded with microserrulations. Short sutural spine present.

Male genitalia: Aedeagus moderate elongated, apex recurved (Fig. 4a). Flagellum elongated, coiling 1.5 turns in sagital plane before bending to the apex.

Female genitalia: Sternum 8 only slightly sclerotized with V-shaped posterior emargination; apices each with 3–4 thick setae (Fig. 4b). 2nd gonacoxae elongated, lacking excarvation with few setae along medial margin (Fig. 4b). 2nd gonapophyses of medium size, strongly curved (Fig. 4b). Syntergum 9 and 10 only slightly scerotized, moderate setose, lateral parts narrow (Fig. 4c).

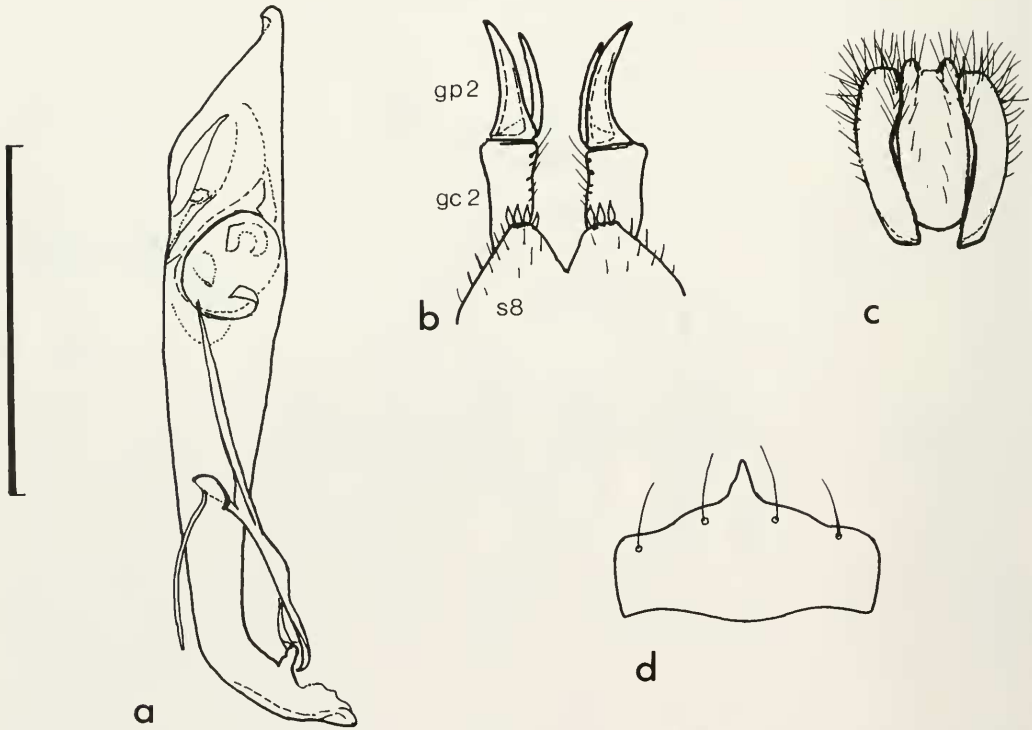

Fig. 4: Male (a), female genitalia (b, c) and labrum (d) of *Cicindela glabra* sp. n.; ventral aspect of apex of sternum 8 (s8), 2nd gonacoxa (gc2) and 2nd gonapophsis (gp2) (b) and dorsal aspect of syntergum 9 & 10 (c). Bar represents 1 mm.

Type Material:

Holotype: ♂, Philippines, Palawan, Port Barton, 7.–12.4.84, 119°08′ E, 10°23′ N, leg. J. Bogenberger; deposited in the Zoologische Staatssammlung München. Paratypes same data as holotype; 2 ♀♀ and 3 ♂♂ in the author's collection, 1 ♂ in coll. J. Wiesner.

Distribution: Known only from the type series from northern Palawan.

Diagnosis: *Cicindela glabra* has to be assigned according to the from of the flagellum to subgenus *Cylindera* (genus *Cylindera* sensu Rivalier, 1961). Its most distinctive diagnostic feature is the total lack of secondary setae (white thick hairs) on the entire body. The only other known species of *Cicindela* s. l. from South East Asia lacking body pubescence except for primary setae is *Cicindela rothschildi* W. Horn (*Cylindera* subgenus *Cylinderina*, sensu Rivalier, 1961) from Luzon. This single feature mislead W. Horn (1915) to place *C. rothschildi* into the genus *Odontochila*. *C. glabra* can be distinguished from *C. rothschildi* as well as other species of *Cylinderina* by its testaceous color of labrum and legs, elongated labrum, different type of maculation and more convex pronotum. *C. glabra* mostly resembles *C. elegantissima* W. Horn except for the lack of body pubescence, elongated form of labrum and smaller size. *C. glabra* shows also a close affinity to *C. ibana* Bogenberger and also to some species of *Cylindera* subgenus *Leptinomera* sensu Rivalier (1961) especially to *C. perparva* Cassola and *C. hammondi* Cassola but is additionally distinguished from them by shorter palpi and a more rounded pronotum.

Remarks

Both new species from northern Palawan were found in the same habitat. *Cicindela glabra* sp. n. was sitting on mossy stones or tree litter in a tiny streamlet in the forest. *Therates palawanensis* sp. n. was found in close proximity flying in the vegetation. The habitat of these new species resembles the ones of related species. *Therates palawanensis* is closely related to species from Borneo and *Cicindela glabra* sp. n. has also closer phyllogenetic affinities to species from Sumatra and Borneo than to ones from Luzon or other Philippine Islands. This confirms the close faunistic relationship of Borneo and Palawan.

Acknowledgement

I thank J. Wiesner for valuable discussion and making his paper on *Therates* available prior publication.

Zusammenfassung

Zwei neue Arten von Cicindelidae werden aus Nord Palawan beschrieben. *Therates palawanensis* sp. n. ist eng verwandt zu *T. bryanti* W. Horn und *T. erinnys* Bates. *Cicindela (Cylindera) glabra* sp. n. zeichnet sich durch das Fehlen der sekundären Behaarung aus.

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